

Amendment of the Claims:

Please amend the claims to read as follows:

- 1 1. (Previously presented) A method for managing a service across an optical
2 network over a dedicated circuit between a first and second service termination
3 points, the method comprising:
4 generating a service performance report message at each of the service
5 termination points, each service performance report message having service-
6 specific information related to a performance of the service as determined by
7 the service termination point generating that service performance report
8 message, and each service performance report message identifying the service
9 to which the service-specific information in that service performance report
10 message pertains; and
11 transmitting the service performance report message generated by one of
12 the service termination points to the other service termination point over a
13 service management channel to enable an assessment of the performance of
14 the service based on the service performance report messages from both service
15 termination points.
- 1 2. (Original) The method of claim 1, further comprising monitoring the
2 service management channel from an intermediate network element that is in
3 the dedicated circuit between the service termination points to determine a
4 status of the service.
- 1 3. (Original) The method of claim 1, further comprising determining from
2 the performance assessment whether the service is performing in accordance
3 with terms of a service level agreement governing the service.

1 4. (Currently amended) The method of claim 1, wherein the step of
2 generating a service performance report message ~~PRM~~ is a scheduled event.

1 5. (Currently amended) The method of claim 1, further comprising
2 monitoring the service performance report messages ~~PRMs~~ generated by the
3 termination points at an intermediate network element connected to the
4 dedicated circuit between the termination points.

1 6. (Previously Presented) The method of claim 1, further comprising
2 transmitting a service query command to each of the service termination points
3 over the service management channel.

1 7. (Previously Presented) The method of claim 6, further comprising
2 receiving a service report having service configuration information over the
3 service management channel from each of the service termination points in
4 response to the service query commands.

1 8. (Original) The method of claim 1, further comprising transmitting a
2 command message over the service management channel to one of the service
3 termination points to change a state of that service termination point.

1 9. (Original) The method of claim 8, wherein the state of the service
2 termination point is a loopback condition, and further comprising transmitting
3 a test signal to that one service termination point to verify connectivity.

1 10. (canceled)

1 11. (previously presented) The network element of claim 19, wherein the
2 service management channel includes a byte of a path overhead of an optical
3 transmission frame.

12. (previously presented) The network element of claim 19, wherein the service management channel includes a header in a Generic Framing Procedure client management frame.

13. (previously presented) The network element of claim 19, wherein the message is one of a command message, a response to a command message, a service performance report message, and a priority code message.

14. (canceled)

15. (canceled)

16. (previously presented) The network element of claim 19, wherein the service is one of an asynchronous service, a synchronous service, a local area network service, a storage area network service, and a managed wavelength service.

17. (canceled)

18. (canceled)

19. (previously presented) A network element connected at one end of a dedicated circuit used to carry customer traffic associated with a service, the network element comprising:

a client interface receiving client signals from a client network;

a service management channel entity deriving from the client signals service-specific information related to a performance of the service and generating a message in response to the service performance information, the message identifying the service to which the service performance information in the message pertains; and

a transport interface for mapping and adapting the client signals to an

11 optical transport facility, the transport interface transmitting the message to a
12 network element at the other end of the dedicated circuit over a service
13 management channel capable of carrying the message across a network-to-
14 network interface.

1 20. (canceled)

1 21. (previously presented) The network element of claim 11, wherein the
2 optical transmission frame is a Synchronous Optical Network (SONET) frame
3 and the byte of the path overhead is a Z3 byte.

1 22. (previously presented) The network element of claim 11, wherein the
2 path overhead byte has bits for conveying a status of the service and bits for
3 conveying the message.

1 23. (previously presented) The network element of claim 22, wherein the
2 path overhead byte further comprises bits for conveying commands and
3 responses.

1 24. (previously presented) The network element of claim 12, wherein the
2 header includes a payload type indicator (PTI) field and a user payload
3 indicator (UPI) field, and wherein the header indicates that the Generic
4 Framing Procedure client management frame contains the message when the
5 PTI and UPI fields contain certain predefined values.

1 25. (previously presented) The method of claim 1, wherein the first service
2 termination point is in a first network managed by a first service provider and
3 the second service termination point is in a second network managed by a
4 second service provider.